

A roadmap to the mobility and logistics trends that are reshaping Latin America and the Caribbean

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Few services impact quality of life more tangibly than transportation. The process of getting to work, school, the grocery store or a loved one's home can literally define a person's day—for better or for worse. Everyone has an opinion when it comes to mobility, and policies regarding transportation tend to provoke passionate reactions.

Governments today face intense pressure to provide relief from rising gasoline or diesel prices, but also to resolve structural weaknesses in their transportation systems that were exacerbated by the COVID-19 pandemic. These include production chain delays due to inadequate shipping and logistics, declining ridership on subways and buses, traffic congestion, road accidents and the perennial challenge of repairing potholes. As if that were not enough, governments must also contend with extreme weather linked to climate change while lowering carbon emissions and adapting to technologies such as ride-sharing and electromobility.

Transportation has been at the heart of the IDB's work since the Bank opened its doors in 1959. The IDB has helped to design and finance tens of thousands of kilometers of roads, along with hundreds of bridges, ports, bus networks and subways.

But the focus of the IDB Group's assistance in this sector has changed profoundly in recent years. Two decades ago, the region was still in what has been called **"the era of concrete."** Transportation policy was focused on expanding the supply and the coverage of physical transportation infrastructure. During this period, the Bank helped the region to vastly extend its network of paved roads and public transportation systems. These investments yielded enormous returns in terms of greater productivity, lower shipping costs, and faster access to markets, schools and jobs for hundreds of millions of people.

Yet along with these gains, the era of concrete also yielded hard lessons about the risks of focusing entirely on construction. Project evaluations and studies by IDB specialists have repeatedly shown the need for new paradigms that can ensure the **quality, equity, and sustainability** of transportation services. Protests through Latin American and Caribbean during the last decade have echoed these themes.

The IDB's 2020 Development in the Americas report, "[From Structures to Services](#)," offered a comprehensive analysis of these problems and explained why the region will need to **improve the customer experience** when people use existing services, **overhaul regulations** that inhibit new approaches and investments, and **embrace technological advances** that could transform mobility and logistics. The 2020 update to the [IDB's Transport Sector Framework Document](#) laid out a detailed roadmap for achieving these goals.

Today, governments are acutely aware that merely building new infrastructure is not the solution, and they are seeking the IDB Group's assistance in designing smarter transportation services that will meet their people's expectations.

This change can be seen in **five broad shifts** that are driving the IDB Group's transportation portfolio.



1

*First, governments today are much more attuned to **the social dimension of transportation services**, and to the imperative of making them safe, convenient and affordable to users and financially sustainable for operators*

The shift is particularly evident in public transportation. The IDB was a pioneer in helping to design and finance BRT and metro systems. Now, the Bank is helping governments to focus on the affordability and service quality of these systems, while exploring ways to increase revenues for maintenance and future expansion. In some cases, this can mean introducing enhancements such as Argentina's [SUBE](#) fare card, which can be used multiple modes of transport. The program places direct subsidies on the fare cards of the poorest travelers, easing the burden of mobility costs for one in three Buenos Aires residents. It also illustrates the potential of combining smart cards and socio-economic data to precisely target transportation subsidies to the poor, instead of wasting resources on higher-income users who can afford to pay full fare.

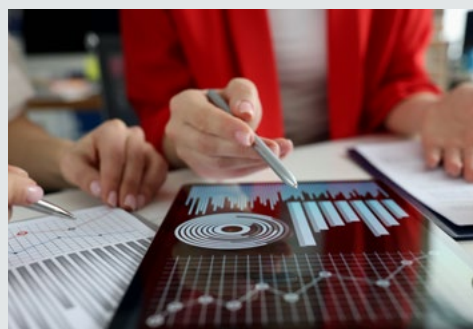
Safety and convenience have specific meanings for individual users. Women are often concerned about sexual harassment and crime on public transportation. People with physical disabilities depend on infrastructure that enables them to easily access, board and transfer through various modes of transport. The Bank is helping transportation operators to address all these issues. Given that the transportation industry has traditionally employed men almost exclusively, both in construction and operation, the IDB has also financed pilot programs

to enable the training and hiring women for roles such as heavy equipment operators in [Haiti and Paraguay](#) and bus drivers in **Bogota and Santiago (Box 1)**.

As the proportion of people who can afford a motorcycle or an automobile has increased in the region, governments have also had to move beyond the mindset that casts private mobility as the enemy of public transportation. Evidence shows that such vehicles meet the legitimate needs of millions of commuters who cannot easily access public transportation. In large, crowded cities, the challenge today is to offer incentives for using public transportation on regular trips in combination with measures such as congestion fees to ensure the most efficient use of private vehicles.

Box 1. What will it take for women to thrive in Latin America's transportation industries?

Around the world, labor market disruptions and changing social norms are leading companies to recruit women for roles traditionally reserved for men. Within the spectrum of occupations included in the transportation value chain, construction and heavy equipment are particularly ripe for greater participation by women, as are a wide range of well-paying jobs in management and the service side of the industry.



In the United States, labor shortages in the construction industries have prompted companies to recruit women for jobs as building inspectors, construction site managers, estimators, laborers and heavy equipment operators. As a result, women went from representing just 2 percent of the U.S. construction workforce in 1990 to [more than 9 percent today](#). The shift is also driven by a growing awareness that when it comes to learning ability, attention to detail, communications skills, attitude and reliability, women often outperform men.

To encourage this trend in Latin America and the Caribbean, where women still represent an average of just 3.8 percent of construction workers, the IDB has been mainstreaming gender components into infrastructure projects. The Bank financed road projects in Haiti, Honduras, Nicaragua and Paraguay that included pilot training programs for women in nontraditional occupations such as heavy machinery operation. As part of these pilots, participating contractors committed to offer paid internships to graduates of the programs for up to five months.

The IDB recently completed a comprehensive evaluation of these projects, including in-depth interviews with many of the women who participated. The evaluations showed that women can quickly acquire the skills needed to operate heavy machinery and perform other construction jobs, and that they can meet or exceed the expectations of male colleagues and supervisors. On a personal level, most participants in the programs came away with greater self-esteem and confidence that they could succeed in this industry.

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However, the evaluations pointed to several areas that will need to be addressed for these kinds of training programs to have a sustained impact. Although special measures were implemented to require gender sensitivity training for male workers and accommodations such as gender-specific bathrooms at job sites, some participating women still reported incidents of sexual harassment, for example. Many women also said they had not been able to obtain permanent jobs in the construction industry after they finished their internships.

In their analysis, the evaluation recommended offering women longer paid internships, of at least 10 months duration. More importantly, it stressed the need to provide permanent incentives for companies that hire and retain women on publicly funded infrastructure contracts. Longer internships will enable women to accumulate more practice hours and increase their mastery of specific equipment. And financial incentives will help to overcome the inertia of private contractors that are reluctant to change, while also generating virtuous competition among firms that want to showcase their commitment to gender equality.

Future efforts should also focus more deliberately on overcoming cultural barriers to the entry of women. Programs should invest more time in sensitivity training for male workers and managers, so that they are better prepared to accept female colleagues, treat them with respect, and foster an inclusive and diverse work environment that will encourage women to pursue careers in construction. Such efforts can include cultivating and rewarding male mentors who become champions of their female colleagues, and financing public information campaigns to celebrate women in construction and the companies they work for.

Finally, the evaluations highlighted the need for broader cultural and institutional change to enable women to work in these industries. Single women with children or other dependents, for example, found it difficult to find child-care arrangements that would enable them to be away from home for a standard work shift at a construction site. To hold a permanent job in construction, such women will need a range of flexible and affordable care-support options, from both public and private providers.

Perhaps the central finding of the evaluations is that market forces alone will not succeed in opening the construction industries to women in Latin America and the Caribbean. Doing so is a long-term project that requires sustained and deliberate commitment, discussion and action by workers, contractors and governments. But the potential rewards, both for women and the companies they work for, are immense.





2

Second, governments are embracing new **institutional and regulatory arrangements** in order to improve project success and **encourage more private investment** in transportation

The absence of an institutional ecosystem conducive to well-planned investments in transportation that involve the private sector has been a consistent shortcoming in the region. To reduce the risk of inadequate socioenvironmental impact studies, insufficient maintenance, corruption risks or flawed funding models, the Bank is giving renewed emphasis to institutional strengthening that enables the efficient planning, prioritization, and structuring of transportation projects.

Today the IDB Group is seeking to replicate models such those used in **Brazil**, where institutional strengthening components for better project monitoring and evaluation resulted in improved project execution and lowered the risk of cost overruns.

The Bank is pushing for greater transparency and early private sector involvement in the project preparation cycle, as a means of increasing project bankability and enhancing the competitiveness of bidding processes in public-private projects. This was one of the key success factors in new metro in **Quito**, which was built under budget and ahead of schedule.

The IDB is also promoting the creation of institutional structures that can guide the transition from informal, uncoordinated fleets of minibuses to centrally integrated system that award long-term concessions to firms with professional standards. In **Bogota**, the IDB has supported several stages of this process over more than 15 years, financing technical studies, the procurement of modern buses, and integration of cable cars, electric buses and the future metro into the system.





3

*Third, countries are looking to turn **logistics performance** into a central pillar of competitiveness and a catalyst for growth*

In the past, logistics was often an afterthought in transportation investments, and few governments were including national logistics strategies as part of their development agenda. The region has paid a huge price for this weakness, falling far behind other regions—particularly in Asia—that now out-compete Latin America in shipping costs and processing times.

The IDB has been at the forefront of a view shift in Latin America and the Caribbean to see logistics as a critical enabler that requires long-term planning and coordination among numerous public entities and private operators, helping governments to embrace cross-sector strategies that simultaneously stimulate different economic sectors, addressing both first mile challenges, long-haul transportation, the last mile, and foreign trade logistics.

In **Brazil**, for example, the Bank helped to develop the Road Master Plan and the National Logistics Plan, which have helped to reduce logistics bottlenecks by enabling planning and establishing investment priorities with the private sector. These plans have also fostered coordination with key industries (particularly agriculture) and government agencies such as customs.

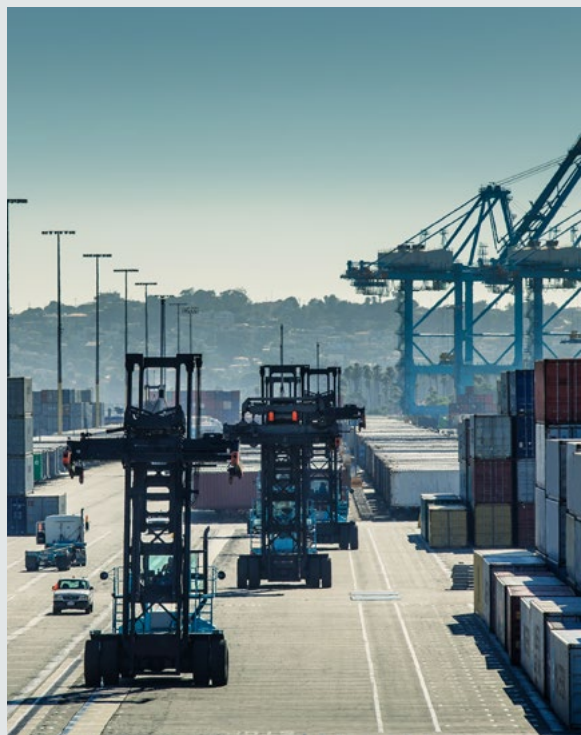
In **Panama**, the Bank made strategic use of policy-based loans to facilitate a long-term approach to planning. Building on years of prior technical support from the Bank, these loans gave impetus to the critical matrix of regulatory, institutional, and operational reforms that were needed for Panama to consolidate its position as one of the world's preeminent shipping and logistics hubs.

Over the last decade, the Bank has also helped many other governments to make significant institutional and regulatory reforms to improve the planning and implementation of logistics policies, as exemplified by Colombia's National Logistics Policy and the National Logistics Plans of Peru, Mexico, Paraguay, Ecuador, the Dominican Republic, and the Central American countries (**Box 2**).

Box 2. Using policy-based loans to ensure that logistics reforms go from paper to pavement

The IDB has a long record of financing diagnostic studies and providing technical expertise to help governments lay the groundwork for national logistics plans.

But even the best plans tend to struggle when they move into the execution phase. This is partly because complex reform processes are inevitably affected by shifting political priorities, budget battles and short media attention spans. Logistics reforms also require the coordinated action of multiple stakeholders who may have conflicting agendas, including private firms, customs agencies, transportation system operators, regulatory bodies, legislators and trade unions.



In the worst case, these factors can condemn a well-designed logistics strategy to remain on “paper only.” To help prevent this outcome, the IDB in recent years has used policy-based loans (PBLs) as a tool to ensure the implementation and long-term continuity of logistics reforms. These loans are attractive to governments because they offer significant resources for use on immediate budget priorities. Since disbursement of funds on these loans is conditional on the achievement of critical milestones on a reform process, PBLs also exert powerful leverage to ensure that the implementation of a logistics strategy stays on track over stages that can span several years. Most PBL operations are designed in two or more successive stages, each of which is linked to a specific list of policy actions that the borrowing government must complete to receive funds.

The IDB has designed PBLs to ensure that critical logistics legislation is approved, regulations and relevant technical norms are published, and new logistics agencies are created with the necessary budget and staffing, for example. Since some governments in the region must secure the votes of their legislative chambers for approval of a PBL, these loans have sent a strong public signal of a government’s long-term commitment to the logistics strategy. They have also generated visibility and momentum for the logistics reform agenda, increasing the likelihood that relevant stakeholders will support the new laws and regulations, and facilitating the on-going public-private dialogue that is essential to enabling change on the ground.

In all, the IDB has designed 13 PBL operations in the transportation sector. In addition to [Panama](#), where PBLs were instrumental in supporting the government’s canal expansion and logistics projects, the Bank has used these instruments to enable logistics modernization in [Brazil](#), [Colombia](#), [Honduras](#) and [Bolivia](#).



4

*Fourth, governments are looking for innovative ways to **secure resources for maintaining transport infrastructure.***

Given fiscal constraints, more governments are now interested in adopting business models that create incentives for private operators to perform maintenance proactively. The Bank has financed a particularly promising approach in **Uruguay**, with the use of [service-level rehabilitation and maintenance contracts](#). Since these 20-year contracts integrate building, refurbishing and maintaining the national road network, they drastically reduce the moral hazard that typically affects road works, where contractors may be tempted to cut corners during construction. The [evidence indicates](#) that by ensuring a source of stable, long-term revenue, they also enable contractors to borrow from multilateral banks and issue bonds to finance both maintenance and substantial construction projects, reducing the burden on the public budgets.

The IDB has also helped **Jamaica** to use performance-based contracts to avoid incurring higher maintenance costs over the long term, and it has financed road-maintenance programs for rural roads in **Peru** that rely on hundreds of micro-businesses that provide local employment with a large participation by women.



5

*Finally, the **digital revolution** is allowing governments to embrace **technology as a means of accelerating the modernization and decarbonization** of their transportation systems*

Instead of merely adopting technology to automate existing processes, digital transformation offers a historic opportunity to **fundamentally reconfigure transportation systems** with new actors, new services and a greater focus on users. The proliferation of mobile telephony and GPS tracking has led to an exponential increase in data about the movement of people and goods. As this data is used to [optimize transportation planning, efficiency and convenience](#), it will become more valuable than traditional inputs such as asphalt or fuel.

Since the transportation industries represent the third largest source of carbon emissions globally, harnessing data and technology will also be crucial to enabling countries to meet national climate commitments. Electromobility can be a key contributor to mitigation efforts, for example, and computer modeling is enabling new approaches to constructing roads so that they are better adapted to harsher weather phenomena.

The IDB has recently completed an [in-depth study](#) on what it will take to achieve this reconfiguration, based existing research and a survey 223 public and private sector transportation executives in Latin America and the Caribbean. Two thirds of the surveyed organizations reported having a digital transformation strategy. Airlines, logistics and mass transportation companies are currently leading these efforts, with the primary goal of improving the customer experience, lowering their carbon footprint, and generating new business areas. Other companies are still primarily using technology to reduce costs through automation, and public firms report being far behind their private peers.

The study also found that public policies regarding digital transformation in transportation are still fragmented and lack clear objectives. Although relevant public institutions have been strengthened, there is a pressing need for specialized professionals and strong coordination mechanisms to link public efforts with private investment.

The IDB Group is assisting governments and companies on all these fronts. In El Salvador, the Bank helped to finance a system that uses [artificial intelligence to prevent collisions](#) between large vehicles and public buses. In Haiti, it enabled the used of [drones and LIDAR sensors](#) to monitor the construction of road infrastructure. In Chile, it is helping the government to evaluate the viability of [autonomous vehicles](#). And the Bank's technical teams have also developed applications that use computer vision to [remotely assess the quality of roads](#) and signage, among many other projects that are harnessing technology to transform mobility and logistics throughout the region.



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